# PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY	PCT
To: F.R. KELLY & CO Attn. Boyce, Conor 27 Clyde Road Ballsbridge	NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION
Dublin 4 IRBLAND	725
	(PCT Rule 44.1)
	Date of mailing (day/month/year) 13/12/2004
Applicant's or agent's file reference	
P71599PC00	FOR FURTHER ACTION See paragraphs 1 and 4 below
International application No PCT/EP2004/010199	International filing date (day/month/year) 13/09/2004
Applicant /	13/03/2004
FOTONATION VISION LIMITED	
Where? Directly to the international Eureau of WiPO.3 1211 Geneva 20, Switzerland, For more detailed instructions, see the noise on the acc.  The applicant is hereby notified that no international search.	ms of the International Application (see Rufe 46):  mally 2 moritis from the date of transmittal of the soletals, see the notes on the accompanying sheet. 4 chemin des Combetiles ascimile Not.: (41-22) 740,14,35  ompanying sheet. In eport will be established and that the declaration under international Searching Authority are transmitted herewith.
applicant's request to forward the texts of both the pr	en transmitted to the international Bureau together with the otest and the decision thereon to the designated Offices.
4. Reminders Shortly after the expiration of 18 months from the priority date, international Bureau, if the applicant wishes to avoid or postpon application, or of the priority claim, must reach the international before the completion of the technical preparations for international before any priority may submit comments on an informal basis on the international Bureau. The international Bureau will send a copy international preliminary examination report has been or is to be the public but not before the expiration of 20 months from the priority date, but only in respect of sevantination must be filled if the applicant wishes to postpone the examination must be filled if the application which set to produce the action of the public but which the application which is to provide a claim of the public but which is provided to the public but of the application which is the public but of the public but only in respect of other designated Offices, the time limit of 30 month months.	e publication, a notice of withdrawel of the international Bureau as provided in Rubes 90-bit, 1 and 90-bits, 7 respectively, half publication.  written opinion of the International Searching Authority to the of survo comments to all designated Offices unless an established. These comments would also be made available to ority date. The provided of the provided of the more designated Offices, a demand for international preliminary entry into the national phase until 30 months from the grionity within 20 months from the privitly date, perform the prescribed fines.  In or latery will apply even if no demand is filed within 19
See the Annex to Form PCT/IS/301 and, for details about the ap Guide, Volume It, National Chapters and the WIPO Internet site	plicable time limits, Office by Office, see the PCT Applicant's

Authorized officer

Shantisaroop Pherai

Name and mailing address of the International Searching Authority

European Patent Office, P.S. 5818 Patentiaan 2 NL-2280 HV Rijswijk

#### NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions consoming the filing of amendments under article 19. The Notes are based on the requirements of the Patter Cooperation Treaty, the Begulations and the Administrative Instructions under that Treaty in cause of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide. a publication of WIPC

in these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

# INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, eiter having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant what his falsat to be published for the curposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is variable in some Steller only.

#### What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the international Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the international Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmitted of the international search report or 16 months from the priority date, whichever time limit expirate later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the international Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rules 46.1).

### Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 45.2).

Where a demand for international preliminary examination has been as filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 2050).

The amendments must be made in the language in which the international application is to be published.

### What documents must/may accompany the amendments?

Letter (Section 205(b)):

The amendments must be submitted with a letter

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant, However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

### NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identications concerning several claims may be grouped, whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled:
- (iii) the claim is new,
- (iv) the claim replaces one or more claims as filed:
- (v) the claim is the result of the division of a claim as filed

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

- [Where originally there were 45 claims and after amendment of some claims there are 51].
   "Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers, claims 30, 33 and 38 unchanged, new claims 49 to 51 acided."
- Where originally there were 15 claims and after amendment of all claims there are 11).
   Claims 1 to 15 replaced by amended claims 1 to 11.\*
- (Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims):
  - "Claims 1 to 5 and 14 unchanged, claims 7 to 13 cancelled; new claims 15, 16 and 17 added," or "Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
- [Where various kinds of amendments are made]:
  - \*Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 15 and 17; new claims 20 and 21 added.\*

### "Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

it must be in the language in which the international appplication is to be published.

it must be brief, not exceeding 500 words if in English or if translated into English.

it should not be confused with and dose not replace the letter indicating the differences between the claims as liked and as amended. It must be liked on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the informational asserch report or the relevance of citations contained in that report. Reference to obtations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

### Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for informational preliminary examination has already been submitted, the applicant must perferably, at the same time of filing the emendments with the international Bursau, also file a copy of such amendments with the international Preliminary Examining Authority (see Palle SC 2/cl), first sentence).

## Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be turnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume It of the PCT Applicant's Guide,

# PATENT COOPERATION TREATY

# **PCT**

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's life reference P71599PC00					FOR FURTHER ACTION	as wei	see Form PCT/ISA/220 as well as, where applicable, item 5 below.			
*	inte	mai	onal ap	plication No.	International filing date (day/mon	th/year)	(Earliest) Priority Date (day/month/year)			
PCT/EP2004/010199				4/010199	13/09/2004	ı	30/09/2003			
	App FO			n vision limite	>					
	ac	0010	ing to /	Article 18. A copy is being	transmitted to the international Burea	u.	nority and is transmitted to the applicant			
	Th	iis ir	nternatio		is of a total of si ry a copy of each prior art document		report.			
	1.	8	With	the report egard to the language, th age in which it was filed, u	e international search was carned ou niess otherwise indicated under this	it on the ba	sis of the international application in the			
				The international this Authority (F		s ot a transl	ation of the international application furnished to			
		b.		With regard to any nucl	eolide and/or amino acid sequenc	e disclosed	in the international application, see Box No. I.			
	2.			Certain claims were fo	und unsearchable (See Box II).					
	3.			Unity of invention is la	cking (see Box III).					
	4,	W	ith rega	rd to the title,						
				***	submitted by the applicant.					
		9			ished by this Authority to read as foli BRATING DETECTION AND		L OF BLEMISHES IN DIGITAL IMAGE			
	5.	W	iin rega	rd to the abstract, the text is approved as	submitted by the applicant.					
				the text has been estab may, within one month I	lished, according to Rule 38.2(b), by rom the date of mailing of this interne	this Authori ational sear	ty as it appears in Box No. IV. The applicant of report, submit comments to this Authority.			
	6.	W	ith rega	rds to the drawings,						
		8.	the fig	pure of the <b>drawings</b> to be	published with the abstract is Figure	No3_				
				X as suggested by	/ the applicant.					
				as selected by t	his Authority, because the applicant	tailed to sur	ggest a figure.			
				as selected by t	his Authority, because this figure bet	ter characte	eizes the invention.			
		b.		none of the figures is to	be published with the abstract.					

## INTERNATIONAL SEARCH REPORT

International Application No. PCT/EP2004/010199

A CLASSIS	CATION OF SUBJECT	TMATTED
		HO4N5/217

C. DOCUMENTS CONSIDERED TO BE RELEVANT

According to International Patent Classification (IPC) or to both national classification and IPC

### 8. FIELDS SEARCHED

Minimum documentation searched relassification system tollowed by classification symbols: IPC 7 HO4N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data, INSPEC, COMPENDEX

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X Y	US 2002/093577 A1 (ICHIKAWA CHIAKI ET AL) 18 July 2002 (2002-07-18)	1,2,4, 18-20,82 3,5-17, 21-66, 68-81, 121-130
	the whole document	83-120
Y	US 6 035 072 A (READ ROBERT LEE) 7 March 2000 (2000-03-07)	5-17, 21-32, 34-39, 58-66, 121-130
	column 4, lines 35-58 	
X Forti	her documente are listed in the continuation of box C. X Patent family members are listed	in annex.
*A* doctame	integrates of cited documents:  "I tater document ambistion dafter the into reprinciply date and not in conflict with or principly date and not in conflict with closed to be or particular relievance invention understand the principle or it invention."	the application but

- \*E\* earlier document but published on or after the international
- tiling date \*L\* document which may throw doubts on priority daim(s) or which is offed to establish the publication date of another
- chation or other special reason (as specified) \*O\* document reterring to an oral disclosure, use, exhibition or
- other means
- "P" document published prior to the international tising date but leter than the priority date claimed

Name and mailing address of the ISA

Dalls of the actual compistion of the international search

"X" document of particular relevance; the diamed invention cannot be considered novel or cannot be considered to sivolve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more offier such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family Date of making of the infernational search report

13/12/2004

2 December 2004

European Patent Office, P.S. 5818 Patentisan 2 NL ~ 2280 HV Fillswijk Tal (133-37) 380-3040 Tv 31 651 and al

Authorized officer

# INTERNATIONAL SEARCH REPORT

International Application No

		PCT/EP2004/010199
gory '	stion) DOCUMENTS CONSIDERED TO BE RELEVANT  Citation of document, with indication, where appropriate, of the relevant passages	Relevent to claim No.
	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 05, 14 September 2000 (2000-09-14) & JP 2000 050062 A (MINOLTA CO LTD), 18 February 2000 (2000-02-18) abstract & US 6 792 161 B1 (HASHIMOTO KEISUKE ET AL) 14 September 2004 (2004-09-14) column 9, line 46 - column 10, line 14; figure 11	3,33, 40-57, 68-81
	US 2003/039402 A1 (ROBINS DAVID R ET AL) 27 February 2003 (2003-02-27) paragraphs '0057! - '0059!	1-130
		***************************************
		***************************************
		***************************************
		11 11 11 11 11 11 11 11 11 11 11 11 11

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No PCT/EP2004/010199

Patent document cited in search report			Publication date	Patent family member(s)			Publication date	
US	2002093577	A1	18-07-2002	JP	2002209147	A	26-07-2002	
US	6035072	A	07-03-2000	NONE				
JP	2000050062	Å	18-02-2000	US	6792161	B1	14-09-2004	
US	6792161	81	14-09-2004	JP	2000050062	A	18-02-2000	
US	2003039402	A1	27-02-2003	WO	03019473	A1	06-03-2003	

# PATENT COOPERATION TREATY

To: see form PCTASA220				PCT  WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORIC (PCT Rule 43bis.1)				
				Date of mailing (day/month/year) s	se form PCT/ISA/210 (second sheet)			
	olicant's or agent's file o form PCT/ISA/2		1100ml 11110ml 1110ml 1110ml	FOR FURTHER See paragraph 2 pe				
PC	rnational application T/EP2004/01019		International filing dat 13.09.2004	e (day/month/year)	Priority date (day/monthlyear) 30.09.2003			
inte	matonal Patent Clas 4N1/409, H04N5/		r both national classificat	on and IPC				
	olicent TONATION VISI	ON LIMITED						
		ON COMPLED	1.00/4.0000000 00000 131 00100/4 001100 00					
1.	This exists as				West of the second seco			
٤.	This opinion contains indications relating to the following items:							
			ions relating to the i	ollowing items:				
	☐ Box No. I	Basis of the o		ollowing items:				
	☑ Box No. I			ollowing rems:				
	☐ Box No. I	Basis of the o	pinion		tive step and industrial applicability			
	☑ Box No. I	Basis of the o	pinion ment of opinion with r		tive step and industrial applicability			
	☑ Box No. II ☑ Box No. II	Basis of the o Priority Non-establish Lack of unity Reasoned sta	pinion  ment of opinion with r of invention stement under Rule 43	egard to novelty, invent	o novelty, inventive step or industrial			
	☑ Box No. II ☑ Box No. III ☐ Box No. IV	Basis of the o Priority Non-establish Lack of unity Reasoned sta	pinion ment of opinion with r of invention stement under Rule 43 citations and explanati	egard to novelty, inventibles.1(a)(i) with regard to	o novelty, inventive step or industrial			
	Box No. I Box No. II Box No. III Box No. IV Box No. V	Basis of the of Priority Non-establish Lack of unity Reasoned str applicability; of Certain documents	pinion ment of opinion with r of invention stement under Rule 43 citations and explanati	egard to novelty, inventible.st(a)(i) with regard to one supporting such sta	o novelty, inventive step or industrial			
	Box No. II Box No. II Box No. IV Box No. VI Box No. VI Box No. VI Box No. VI	Basis of the of Priority Non-establish Lack of unity Reasoned sta applicability; of Certain docus Certain defect	pinion ument of opinion with root invention atterment under Rule 43 citations and explanationers cited	egard to novelty, invent (bis.1(a)(i) with regard to ons supporting such standard	o novelty, inventive step or industrial			
2.	Box No. II Box No. II Box No. IV Box No. VI Box No. VI Box No. VI Box No. VI	Basis of the of Priority Non-establish Lack of unity Reasoned sta applicability; of Certain docur Certain defect Certain obsets	pinion iment of opinion with root invention stement under Rule 43 citations and explanations and explanations in the international attainments cited	egard to novelty, invent (bis.1(a)(i) with regard to ons supporting such standard	o novelty, inventive step or industrial			
2.	Box No. I Box No. II Box No. IV Box No. IV Box No. VI Box No. VI Box No. VII Box No. VIII FURTHER ACT If a demand for written opinion of the applicant che	Basis of the of Priority Non-establish Lack of unity Reasoned stapplicability; of Certain docur Certain defector Certain obset ON International profit the International stapplicability of the International Profit Real united Fagus under Fagus und	polition  Imment of opinion with r of invention Internet under Rule 43 Intations and explanati ments cited ts in the international is vations on the interna- eliminary examination sal Pratiminary Examin titly other than this one	egard to novelty, inventions: 1(a)(i) with regard to one supporting such statements application application application is made, this opinion wing Authority (*IPEA*) at to be the IPEA and the	o novelty, inventive step or industrial			
2.	Box No. I Box No. II Box No. III Box No. IV Box No. VI Box No. VI Box No. VIII Box No. VIII FURTHER ACT If a demand for on the applicant che international church sophion is submit to the IPI this ophion is, submit to the IPI submit to the IPI	Basis of the conformation	pinion  ment of opinion with roof invention  terment under Rule 43  citations and explanation ments cited  to in the international invations on the international  eliminary examination and Preliminary Examin withy other than this one  6.6.1 bis(b) that writte  boyly together, where app	egard to novelty, inventi- ibis.1(a)(i) with regard to ons supporting such states application tional application is made, this opinion wining Authority ("IPEA"), to be the IPEA and the no opinions of this Intern a written opinion of the propriate, with amendm	o novelty, inventive step or industrial attement  iii usually be considered to be a However, this does not apply where e chosen IPEA has notified the			
2.	Box No. I Box No. II Box No. II Box No. IV Box No. VI Box No. VII Box No. VIII FURTHER ACT If a demand for invitten opinion to the applicant ob the total submit to the IPI months from the to the proprise of	Basis of the c Priority Non-establish Lack of unity Reasoned sit applicability; Reasoned sit applicability; Reasoned sit applicability; Reasoned sit applicability; Reasoned sit applicability of certain defect Certain obsert Ont o	polition  tement of opinion with roof invention atement under Rule 43 bitations and explanation ments cited tas in the international revations on the interna- poliminary examination and Preliminary Examination that Preliminary Examination and Preliminary Examination that withe booke, considered to be ply together, where app of Form PCT/SA/220	egard to novelty, inventi- ibis.1(a)(i) with regard to ons supporting such states application tional application is made, this opinion wining Authority ("IPEA"), to be the IPEA and the no opinions of this Intern a written opinion of the propriate, with amendm	o novelty, inventive step or industrial attement  ill usually be considered to be a However, this does not apply where e chosen IPEA has notifed the autional Searching Authority is IPEA, the applicant is invited to tents, before the expiration of three			





Hardell, A



# WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

4. Additional comments:

International application No. PCT/EP2004/010199

	Box I	No. I Basis of the opinion					
1.	With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.						
	li li	This opinion has been established on the basis of a translation from the original language into the following anguage , which is the language of a translation furnished for the purposes of international search under Rules 12.3 and 23.1(b)).					
2.	. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:						
	a. typ	e of material:					
		a sequence listing					
		table(s) related to the sequence listing					
	b. for	mat of material:					
		in written format					
		in computer readable form					
	c. tim	e of filing/furnishing:					
		contained in the international application as filed.					
		filed together with the international application in computer readable form.					
		furnished subsequently to this Authority for the purposes of search.					
3.	t	n addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto as been filed or furnished, the required statements that the information in the subsequent or additional oppies is identical to that in the application as filed or does not go beyond the application as filed, as ppropriate, were furnished.					

# WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No. PCT/EP2004/010199

	80	x No. II	Priority					
٤.		The io	llowing document ha	as not bee	n fumished	<b>d</b> :		
			copy of the earlier	application	n whose pr	iority has been claimed (Rule 43bis.1 and 66.7(a)).		
			translation of the e	arlier appl	ication who	ose priority has been claimed (Flule 43bis.1 and 66.7(b)).		
Consequently it has not been possible to consider the validity of the priority claim. This opin nevertheless been established on the assumption that the relevant date is the claimed prior								
2.		has be		ıles 43bis	1 and 64.1	rity had been claimed due to the fact that the priority claim ). Thus for the purposes of this opinion, the international the relevant date.		
3.		It has not been possible to consider the validity of the priority claim because a copy of the priority documen was not available to the ISA at the time that the search was conducted (Rule 17.1). This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.						
4.	Ade	ditional	observations, if nece	essary:				
		x No. V				ibis.1(a)(i) with regard to novelty, inventive step or ns supporting such statement		
1.		tement						
	No	velty (N	)	Yes: No:	Claims Claims	1-130		
	inv	entive s	tep (IS)	Yes:	Claims	67,83-120		
				No:	Claims	1-66,68-82,121-130		
	Ind	ustrial a	applicability (IA)	Yes: No:	Claims Claims	1-130		
2.	Cit	ations a	nd explanations					
	sei	separ	ate sheet					

### Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

- 1. Reference is made to the following documents:
  - D1: US 2002/093577 A1 (ICHIKAWA CHIAKI ET AL) 18 July 2002 (2002-07-18)
  - D2: US-A-6 035 072 (READ ROBERT LEE) 7 March 2000 (2000-03-07)
  - D3: PATENT ABSTRACTS OF JAPAN vol. 2000, no. 05, 14 September 2000 (2000-09-14) & JP 2000 050062 A (MINOLTA CO LTD), 18 February 2000 (2000-02-18) & US-B1-6 792 161, 14 September 2004 (2004-09-14)
- The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1, 2, 4, 18-20 and 82 does not involve an inventive step in the sense of Article 33(3) PCT.
- 2.1 The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and discloses (the references in parentheses applying to this document):
- a method of automatically correcting dust artifact regions within images acquired by a digital acquisition device including an optical system (par. 2,6), comprising:
- digitally-acquiring one or more original images with said digital acquisition device (par.30-32; fig.3 steps 32,33);
- determining probabilities that certain pixels correspond to dust artifact regions within said one or more digitally-acquired images (par.33; fig.3 step 34);
- associating the dust artifact regions with one or more extracted parameters relating to the optical system when the one or more images were acquired (par.33.; fig.3 step 35);
- forming a statistical dust map including mapped dust regions based on the dust artifact probability determining and associating (par.35-36; fig.4);
- correcting pixels corresponding to dust artifact regions ... based on the associated statistical dust map.

The subject-matter of claim 1 differs from the disclosure of D1 in that the corrected pixels are pixels "within each of said one or more original images", whereas in D1 the corrected pixels are pixels of different images (fig.3 steps 38-42).

However, no technical effect is achieved and no problem is solved by this minor

modification. In both cases (D1 and present application) the dust map enables the dust correction of images taken with a particular setting of the optical system of the camera. It is therefore a pure matter of choice without the exercise of inventive skill to either use the dust map for the correction of a different image or the same image.

Claim 1 therefore does not involve an inventive step (Art. 33(3) PCT).

- 2.2 (Claims 2, 4) Dependent claims 2 and 4 relate to the choice of optical parameters, which have been disclosed by D1 (D1: par.34).
- 2.3 (Claims 18-20) Processing the image either inside the camera or outside in an external device is a matter of choice without inventive skill.
- 2.4 (Claim 82) Dust artifact data is sorted according to particular criteria (called metadata in claim 82) in D1; fig.4.
- Furthermore, dependent claims 3, 5-17, 21-66, 68-81 and 121-130 do not contain
  any features which, in combination with the features of any claim to which they refer,
  meet the requirements of the PCT in respect of inventive step (Art. 33(3) PCT).
- 3.1 (Claims 5-17, 21-32, 34-39, 58-66, 121-130) Dependent claims 5-17, 21-32, 34-39, 58-66 and 121-130 relate to a particular way of determining the probability that a particular pixel is an image of a dust particle.

The problem addressed by these claims can therefore be regarded as how to decide wether a specific pixel under test represents an image of a dust particle or not. With this problem in mind the skilled person would consult document D2 which also deals with the problem of dust detection in imaging applications (D2: col.2 l.8-61).

D2 discloses in detail the subject-matter of the dependent claims mentioned above. It explicitly describes how the dust detection is performed on an arbitrary image which does not have to be a reference image (D2: col.2 l.88-11), the use of thresholds (D2: fig.6 step 640) and how the dust map is updated with further images (D2: col.4 l.37-58).

A skilled person would easily combine D1 with the dust detection algorithm of D2 in order to arrive at the subject-matter of the above-mentioned claims. Therefore, these claims do not involve an inventive step (Art. 33(3) PCT).

3.2 (Claims 3, 33, 40-57, 68-81) Further dependent claims 3, 33, 40-57 and 68-81 relate to a particular appearance of dust particle images and how to calculate certain optical parameters of the system after an analysis of the dust particle image.

The problem addressed by these claims can therefore be regarded as how to relate parameters of the optical system to the appearance of the dust particle image.

A similar problem has been solved by document D3 (reference is made to the US-document claiming a single priority from the JP-document, which is in time). D3 also addresses the problem of dust in optical imaging applications. D3 discloses the detection of positions (distance along optical axis) of a dust particle in an imaging system with a known optical system depending on the appearance of the dust particle image (D3: fig.11). A skilled person would without the exercise of inventive skill apply the teaching of D3 to the present problem and derive parameters of a variable optical system when the position of the dust particle (distance along optical axis) is known, depending on the appearance of the dust particle image.

The above-mentioned claims do therefore not involve an inventive step (Art. 33(3) PCT).

4. (Claims 67, 83-120) As far as dependent claims 67 and 83-120 can be understood, they relate to a specific way of recalculating existing dust maps generated with a particular setting of the optical system to correlate with other images taken with a different setting of the optical system. The advantage appears to be that any image taken with a new setting of the optical system can be dust-corrected using the recalculated, but existing dust map.

It appears that these details have not been disclosed in any of the cited documents and the combination of features of claims 67 or 83-120 with the features of claim 1 is therefore considered novel and inventive.